Consumer Confidence Report 2023

Naval Air Facility Misawa
Drinking Water System

DFSP Hachinohe, Japan

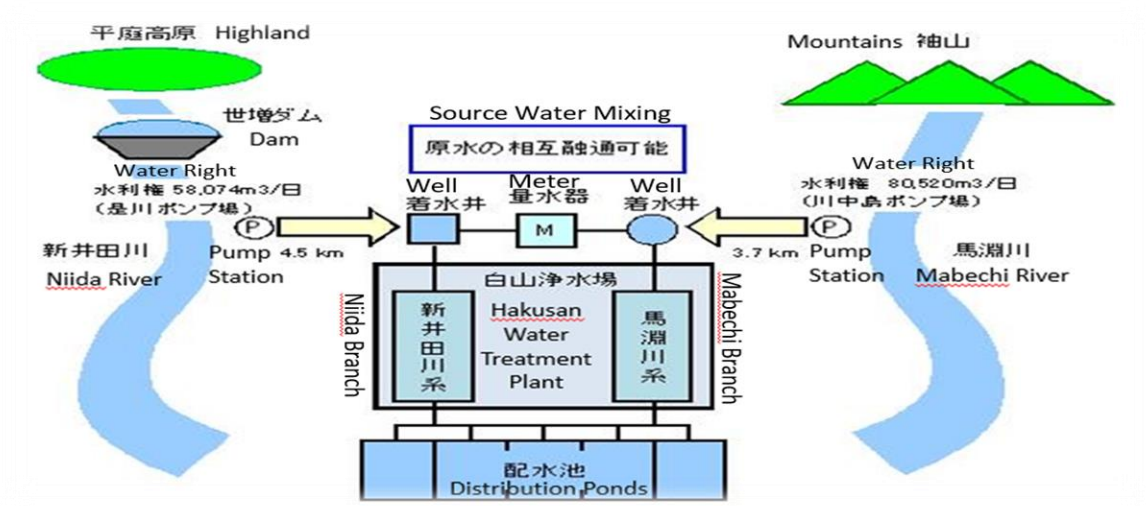
Issued in accordance with Commander, Navy Installations Command Instruction 5090.1B, N4, 15 Mar 2021.
This report reflects monitoring data collected in 2023 and will be updated annually.

Naval Air Facility Misawa is pleased to provide you with this annual report on drinking water quality for Defense Fuel Support Point (DFSP) Hachinohe. This report provides information about the water delivered to DFSP Hachinohe in 2023. It describes where our water comes from, what it contains, and how it compares to standards set by the U.S. Navy's Overseas Drinking Water Program and the Japanese Environmental Governing Standards.

Source of Water

Drinking water at DFSP Hachinohe is purchased from the Hachinohe Regional Water Supply Authority (HRWSA), which owns and operates the Hakusan Water Treatment Plant (HWTP). HWTP treats surface water from the Mabechi River and the Niida River with conventional treatment and chlorine disinfection processes. In 2019, HWTP was visited by the Navy Water Quality Oversight Council. A schematic of the HRWSA system serving DFSP Hachinohe is shown below.

Water Distribution System



Water distribution networks at the three DFSP Hachinohe pump stations are administratively managed together as one water distribution system because all three stations receive treated water from the same source. The Naval Air Facility (NAF) Misawa Public Works Department (PWD) operates the water distribution system within the bounds of DFSP Hachinohe and manages compliance actions with all water quality requirements.

Compliance with Drinking Water Requirements

U.S. military installations overseas are required to meet all criteria established in the latest Japan Environmental Governing Standards (JEGS), which are intended to ensure DoD activities and installations in Japan protect human health and the environment through specific environmental compliance criteria.

Navy installations are required to meet or exceed U.S. National Primary Drinking Water regulations, under the Safe Drinking Water Act of 1974, to ensure overseas drinking water systems meet the same water quality as required in the U.S. These standards require monitoring and testing of the drinking water for contaminants on a regular basis to ensure it is safe to drink. PWD regularly conducts environmental audits to verify compliance, and a Sanitary Survey (SS) is conducted every three years by an external team. During the SS conducted in May 2023, 13 deficiencies were identified; however, 8 of the deficiencies were resolved, and only 5 (1 significant) remain to be resolved. As a result, the Regional Water Quality Board granted DFSP Hachinohe a Conditional Certificate To Operate (CTO). A full CTO will be awarded when closure of the remaining significant deficiency is achieved.

Surface Water Treatment Rule

Surface water is a common source of water within the United States and the rest of the world. As a Japanese water authority, HWTP is not required to adhere to the American water regulations and standards for surface water. However, this does not mean that the water is not safe to drink. NAF Misawa PWD monitors the drinking water received from HWTP to ensure that DFSP Hachinohe is meeting the required American water regulations and standards. In 2023, NAF Misawa PWD started work with Naval Facilities Engineering Systems Command (NAVFAC) Pacific (PAC) in the development of a compliance plan to demonstrate that the Japanese water authority, HWTP, uses a host of high technological and effective treatment methods that either meet or surpass the required treatment techniques of an American water authority. The compliance plan is projected to be completed in late 2024 and requires the approval of Commander Navy Installations Command (CNIC) subject matter experts to ensure that the Japanese water authority is complying with the surface water treatment rule (SWTR).

Important Health Information

Some individuals may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised people, such as those undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, the elderly, and infants can be particularly at risk from infections. These individuals should seek advice about drinking water from their health care providers. The U.S. Environmental Protection Agency (EPA) and the Center for Disease Control and Prevention have established guidelines on the appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants. This information can be obtained by calling the EPA Safe Drinking Water Hotline at 1-800-426-4791.

Possible Source Contaminants

The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline at 1-800-426-4791 or visiting the EPA website at https://www.epa.gov/dwstandardsregulations/drinking-water-contaminant-human-health-effects-information

As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material. It can also pick up other contaminants resulting from the presence of animals or human activity. Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production. They can also come from gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

The U.S. Environmental Protection Agency (EPA) established a three tier public notification plan for drinking water, which is summarized in Table 1 below. We follow this outline to ensure that you are notified in a timely manner if notifications are necessary.

Table 1. The 3 Tiers of Public Notification*

	Required Distribution Time	Required Distribution Time
Tier 1: Immediate Notice	Any time a situation occurs where there is the potential for human health to be immediately impacted, water suppliers have 24 hours to notify people who may drink the water of the situation.	Should a Tier 1 notification be necessary, we will notify you via an All Hands E-mail message and Facebook.
Tier 2: Notice as Soon as Possible	Any time a water system provides water with levels of a contaminant that exceed EPA or state standards or that hasn't been treated properly, but that doesn't pose an immediate risk to human health, the water system must notify its customers as soon as possible, but within 30 days of the violation.	We will notify you of a Tier 2 concern through an All Hands E-mail message and Facebook.
Tier 3: Annual Notice	When water systems violate a drinking water standard that does not have a direct impact on human health (For Example, failing to take a required sample on time) the water supplier has up to a year to provide a notice of this situation to its customers.	Tier 3 notifications are published annually in this document, the Consumer Confidence Report.

*Definitions taken from EPA website.

See http://water.epa.gov/lawsregs/rulesregs/sdwa/publicnotification/basicinformation.cfm for more information.

Other Potential Contaminants

Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. When your water has been sitting for several hours, you can further minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using the water for drinking or cooking. Drinking water samples are collected from consumer taps including family housing units to analyze for lead annually. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at http://www.epa.gov/safewater/lead

Disinfection By Products

Chlorine or other chemicals are added to drinking water during the treatment process to disinfect it from microbial contaminants such as viruses and bacteria. These chemicals also react with dissolved organic matter to produce chemical byproducts that may be harmful. As with other contaminants, these are carefully monitored to ensure consumer health.

Per- and Polyfluoralkyl Substances

What are per- and polyfluoroalkyl substances and where do they come from?

Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of man-made chemicals. PFAS have been used in a variety of industrial and consumer products around the globe, including in the U.S., since the 1940s. Due to their widespread use and environmental persistence, most people in the United States have been exposed to certain PFAS. PFAS have been used to make coatings and products that are used as oil and water repellents for carpets, clothing, paper packaging for food, and cookware. They are also contained in some foams (aqueous film-forming foam or AFFF) used for fighting petroleum fires. PFAS chemicals are persistent in the environment and some are persistent in the human body – meaning they do not break down and they can accumulate over time.

Is there a federal regulation for PFAS in drinking water?

On April 10, 2024, the US EPA established maximum contaminant levels (MCLs) for a subset of PFAS chemicals in Table 2. EPA requires implementation of sampling in accordance with the new MCLs within three years of the publication date and implementation of any required treatment within five years.

These limits did not apply for the 2023 calendar year because they had not been published. However, the DoD proactively promulgated policies to monitor drinking water for PFAS at all service owned and operated water systems at a minimum of every two years. The DoD policy states that if water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than the 2016 EPA health advisory (HA) level of 70 ppt, water systems must take immediate action to reduce exposure to PFOS or PFAS. For levels less than 70 ppt but above the 4 ppt level (draft at the time of policy publication), DoD committed to planning for implementation of the levels once EPA's published MCLs take effect.

Table 2: EPA Regulatory Limits for PFAS	
Chemical	MCL
PFOA	4.0 ppt
PFOS	4.0 ppt
PFNA	10.0 ppt
PFHxS	10.0 ppt
HFPO-DA (GenX Chemicals)	10.0 ppt
Mixture of two or more: PFNA, PFHxS, HFPO-DA, PFBS	Hazard Index of 1

Has NAF Misawa tested its water for PFAS?

Yes. NAF Misawa, DFSP Hachinohe has previously tested for PFAS in 2022 & 2023. Most recently, samples were collected from Bldg. 6100104 in December 2023.

Below MRL

We are pleased to report that drinking water testing results were below the Minimum Reporting Level (MRL) for all 29 PFAS compounds covered by the sampling method, including PFOA and PFOS. This means that PFAS were not detected in your water system. In accordance with DoD policy, the water system will be resampled every two years for your continued protection.

Drinking Water Monitoring

PWD Misawa uses Japanese and EPA approved laboratory methods to analyze our drinking water, and monitors drinking water for the following constituents. Table 3 lists the contaminant and required sampling frequency.

Table 3: Monitoring Frequency	
Constituent	**Frequency**
Coliform Bacteria, pH, Chlorine, Temperature	Monthly
Inorganic Chemicals, Volatile Organic Chemicals, Disinfection Byproducts, Pesticides/PCBs	Annually
Lead and Copper	Triennial
Radionuclides	Once every three years for gross alpha activity, and once every nine year for gross beta particles and photon radioactivity
Asbestos	Once every nine years
PFAS	Once every 2 years

Water Quality Data

The following section lists constituents detected during the latest round of required sampling. Only those constituents detected are listed in Table 4. The presence of a contaminant does not necessarily indicate the water poses a health risk. As such, DFSP Hachinohe drinking water is safe and fit for human consumption.

Table 4: Detected Constituents in Drinking Water					
Inorganic Chemicals					
Contaminant and Unit	Range	MCL	MRDL	Violation	Typical Sources of Contaminants
Barium (ppm)	0.0055	2	NA	No	Erosion of natural deposits
Cyanide (ppm)	0.0043	0.2	NA	No	Erosion of natural deposits
Nitrate (ppm)	0.93 - 1.3	10	NA	No	Runoff from fertilizer use; leaking from septic tanks, sewage, erosion of natural deposits
Sodium (ppm)	9.2	None	NA	No	Salt present in the water that is generally naturally occurring
Disinfectant/Disinfection Byproducts					
Contaminant and Unit	Range	MCL	MRDL	Violation	Typical Sources of Contaminants
Residual Chlorine (ppm)	0.30-0.55	4	4*	No**	Disinfectant water additive to control microbes
Total Trihalomethanes (ppm)	0.031-0.032	0.08	NA	No	By-product of chlorination
Halo Acetic Acids [HAA5] (ppm)	0.013-0.018	0.06	NA	No	By-product of chlorination
Lead and Copper (2023 Data)					
Lead and Copper	90th Percentile	AL	Samples > AL	Violation	Typical Sources of Contaminants
Copper (ppm)	0.0037	1.3	0	No	Corrosion of household plumbing system, erosion of natural deposits
Lead (ppm)	0.0	0.015	0	No	Corrosion of household plumbing system, erosion of natural deposits
Radionuclide					
Contaminant and Unit	Range	MCL	MRDL	Violation	Typical Sources of Contaminants
Gross Alpha (pCi/L)	1.29±0.733	15	NA	No	Erosion of natural deposits
Combined Radium -226 and -228	1.29±0.789	5	NA	No	Erosion of natural deposits
PFAS					
Contaminant and Unit	Range	HI	MRDL	Violation	Typical Sources of Contaminants
Perfluoro-1-butane sulfonic acid (PFBS) (ppt)	0.0011	1	NA	No	Firefighting Foams usage, industrial facility where PFAS were produced or used to manufacture other products

Notes:

*Residual Chlorine - Maximum Residual Disinfectant Level.

**Chlorine residual should be maintained at a minimum of 0.2 ppm to ensure against bacteriological growth in the distribution system. No bacteria has ever been detected in the drinking water.

Abbreviations and Definitions

AL: Action Level. The concentration of a contaminant in water that establishes the appropriate treatment for a water system. AL is based on a 90th percentile value.

HI: Hazard Index. The hazard index is a long-established approach that EPA regularly uses to understand health risk from a chemical mixture (i.e., exposure to multiple chemicals). The HI is made up of a sum of fractions. Each fraction compares the level of each PFAS measured in the water to the health-based water concentration.

MCL: Maximum Contaminant Level. The highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG: Maximum Contaminant Level Goal. The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL: Maximum Residual Disinfectant Level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG: Maximum Residual Disinfection Level Goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable.

ND: Not Detected.

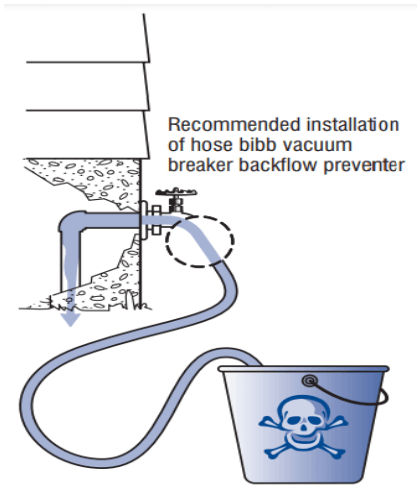
ppm: parts per million, or milligrams per liter (mg/L).

ppb: parts per billion, or micrograms per liter (µg/L).

ppt: parts per trillion, or nanograms per liter (ng/L).

TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

90th percentile: Represents the highest value found out of 90 percent of the samples taken. If the 90th percentile value is greater than the AL, a treatment evaluation and/or mitigation actions must be conducted on the water system.



Cross-connection and Backflow Prevention

Did you know that any connection between a public drinking water system and a separate source of questionable quality is considered a cross-connection?

For example, an ordinary garden hose submerged in a bucket of water, car radiator, or swimming pool can result in backflow contamination. To protect our water supply, a simple screw-on vacuum breaker must always be attached to the faucet when a garden hose is used.

Vacuum Breaker

Frequently Asked Questions

Why is this Consumer Confidence Report needed?

Each U.S. Navy overseas installation is required to provide its customers with a water quality report also known as a Consumer Confidence Report. This report is a general overview of the water quality delivered by your drinking water system. This report lists the regulated contaminants detected in the treated water and the level at which they were found for the preceding calendar year. Any exceedances of applicable regulations or guidance will be reported.

Why does the water sometimes look rusty?

Rusty or reddish tinted water may occur when a sudden change in pressure in the water distribution system causes rust in the distribution pipes to become dislodged. Iron causes the discoloration and is not a health risk. If the water looks rusty, flush your tap for three minutes, or until clear, before using the water. If hot tap water is rusty, the water heater may need to be flushed.

I don't like the taste/smell/appearance of my tap water. What is wrong with it?

Even when water meets standards, you may still object to its taste, smell, or appearance. Taste, smell, and appearance are aesthetic characteristics and do not pose health risks. Common complaints about water aesthetics include temporary cloudiness (typically caused by air bubbles) or chlorine taste (which can be improved by letting the water stand exposed to the air). If you want to improve the taste, smell, and appearance of your water, you can install a home water filter. Please keep in mind that filters require regular maintenance and replacement, and if ignored, these aesthetic characteristics may return.

Monitoring Violations

In December 2023, we became aware that our system was receiving water from Hakusan Water Treatment Plant containing levels of turbidity above 0.3 nephelometric turbidity unit (NTU) during the monthly data collection of the in-line turbidity monitoring system. The number of sample readings above 0.3 NTU had exceeded more than 5 percent of the total allowable monthly samples, as per the JEGS.

Data collection requirements were updated to be weekly to monitor the turbidity levels. There were no exceedances of the MCL of 5 NTU. The drinking water was safe and fit for human consumption. Our drinking water data collection requirements for turbidity were updated to weekly until the turbidity levels reduce to levels prior to December. Additional mitigations were in development if turbidity levels did not return to normalcy of 0.038 – 0.042 NTU.

Public Participation Opportunities and Contacts

The Installation Commanding Officer has established an Installation Water Quality Board tasked with ensuring there is a reliable supply of drinking water for all people using DFSP Hachinohe facilities.

Please contact the NAF Misawa Public Affairs Office at DSN 226-4363 or the NAF Misawa Environmental Division at DSN 226-2497 for questions on drinking water in general.